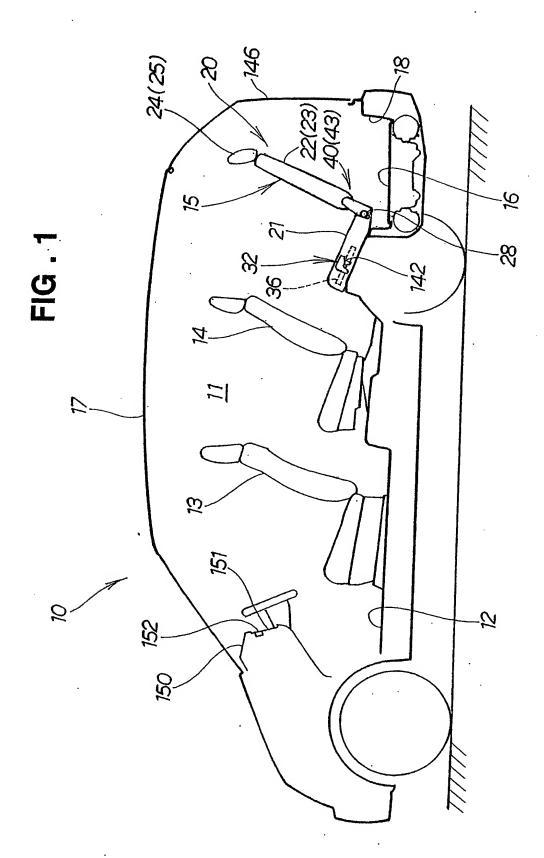
0.518659

Inventor: Suda et al.
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hamre
Phone No.: 612.336.4722
Sheet 1 of 45

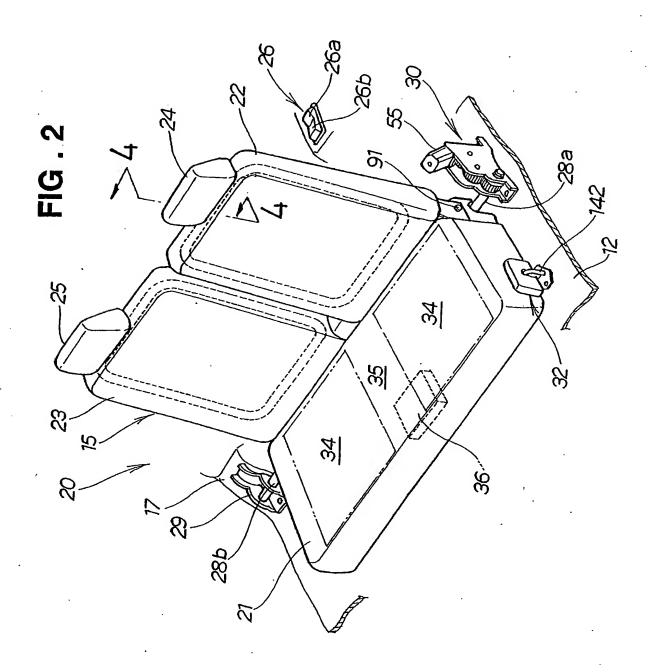


Inventor: Suda et al.

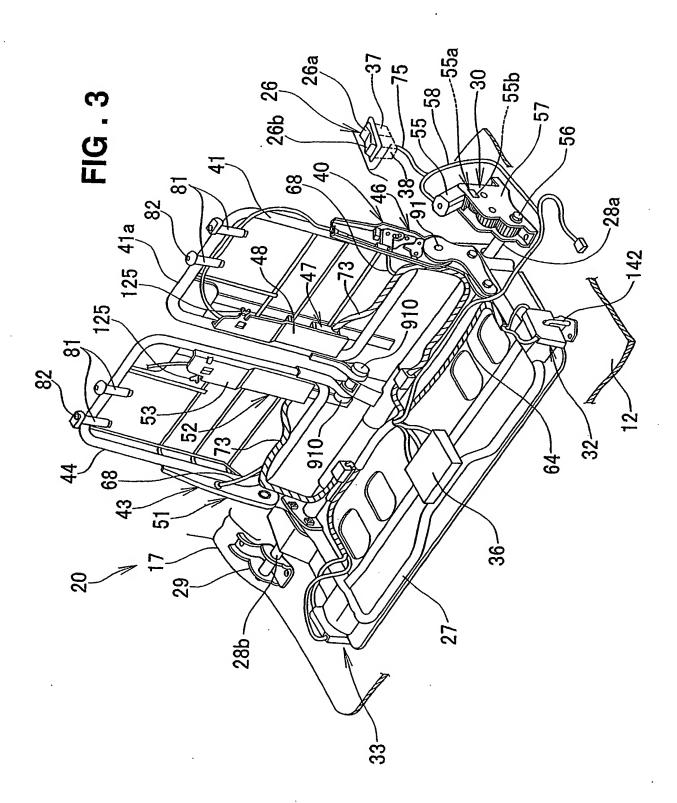
Docket No.: 08373.0341USWO

Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hamre
Phone No.: 612.336.4722

Sheet 2 of 45



Inventor: Suda et al.
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hamre
Phone No.: 612.336.4722
Sheet 3 of 45



Inventor: Suda et al.
Docket No.: 08373.0341 USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hamre
Phone No.: 612.336.4722

Sheet 4 of 45

FIG . 4A

87

88

87

88

88

87

88

87

88

87

88

87

88

87

88

87

88

87

88

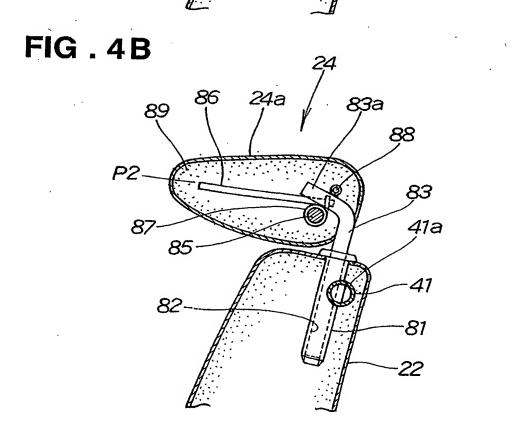
88

89

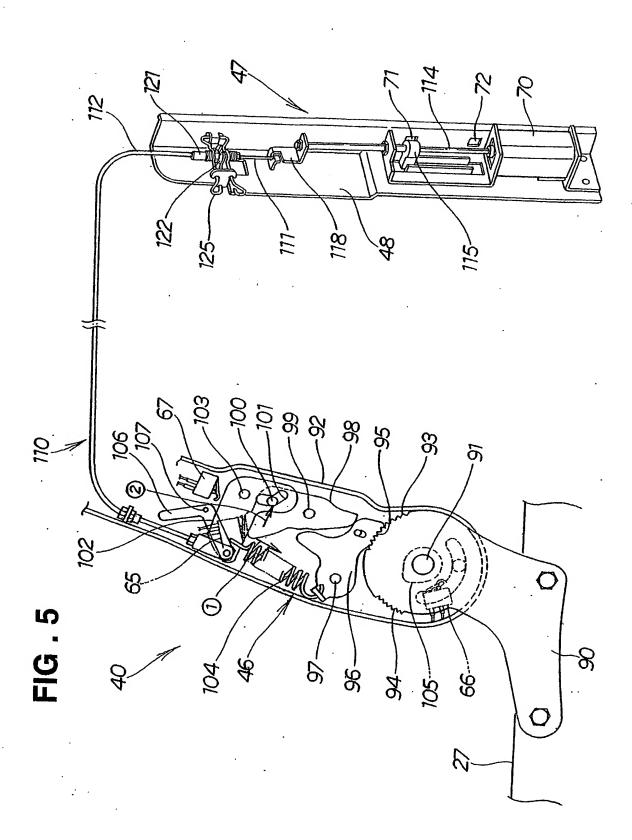
41

81

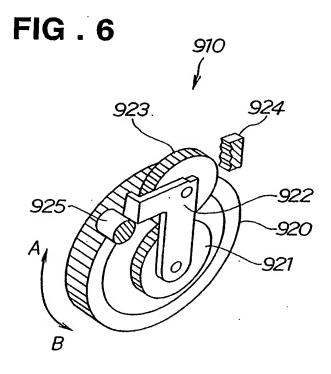
22



Inventor: Suda et al.
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hamre
Phone No.: 612.336.4722
Sheet 5 of 45

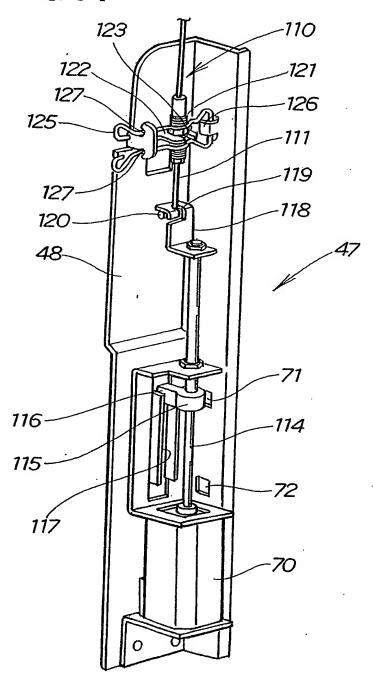


Inventor: Suda et al.
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hamre
Phone No.: 612.336.4722
Sheet 6 of 45



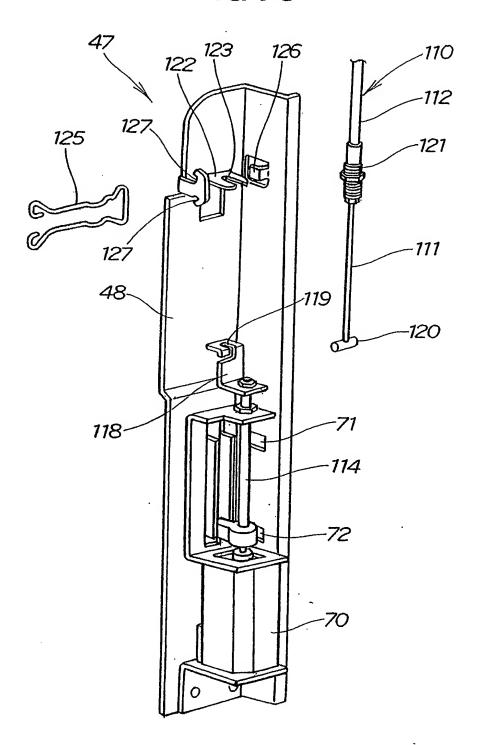
Inventor: Suda et al.
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hantre
Phone No.: 612.336.4722
Sheet 7 of 45

FIG. 7

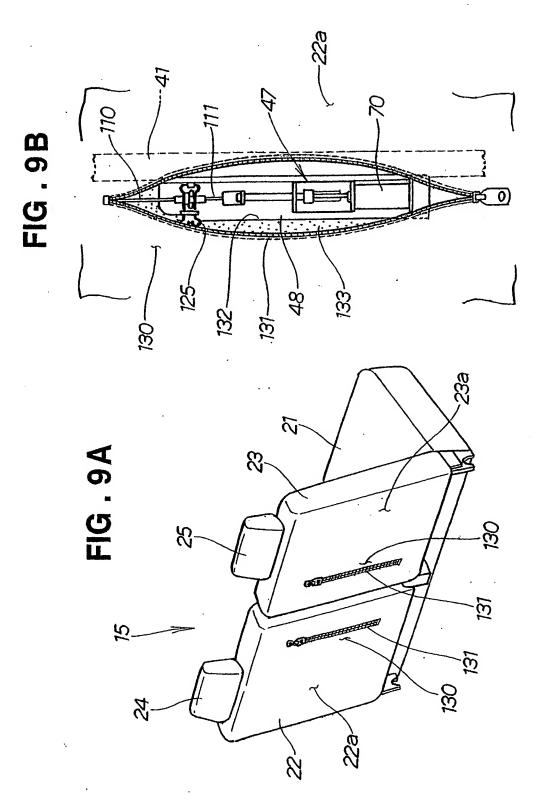


Inventor: Suda et al.
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hamre
Phone No.: 612.336.4722
Sheet 8 of 45

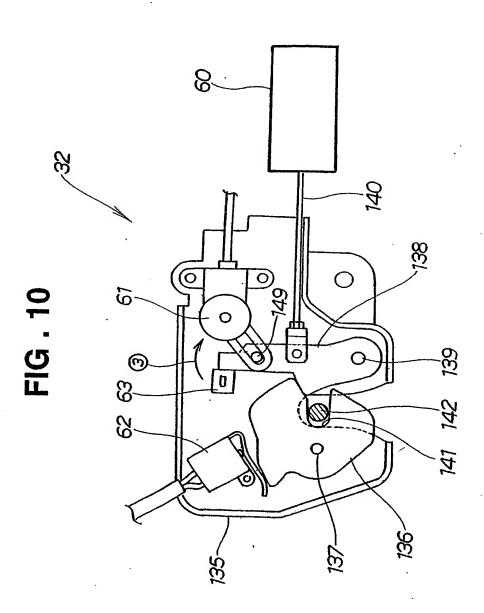
FIG . 8



Inventor: Suda et al.
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hamre
Phone No.: 612.336.4722
Sheet 9 of 45



Inventor: Suda et al.
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hamre
Phone No.: 612.336.4722
Sheet 10 of 45

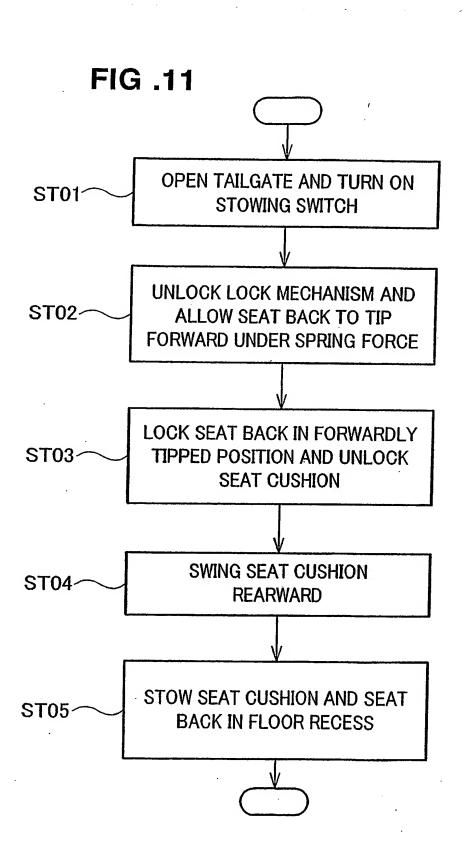


Inventor: Suda et al.

Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT

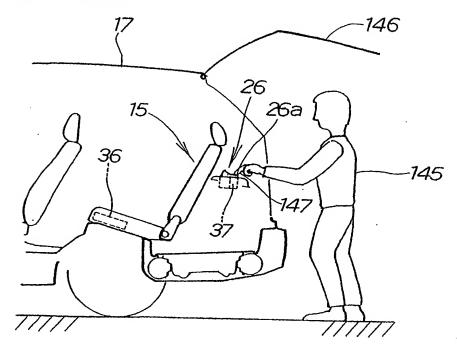
Attorney Name: Curtis B. Hamre Phone No.: 612.336.4722

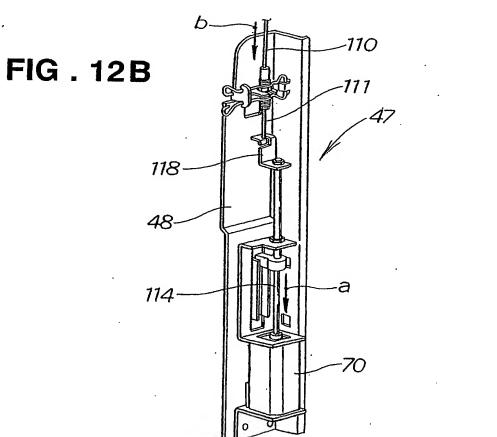
Sheet 11 of 45



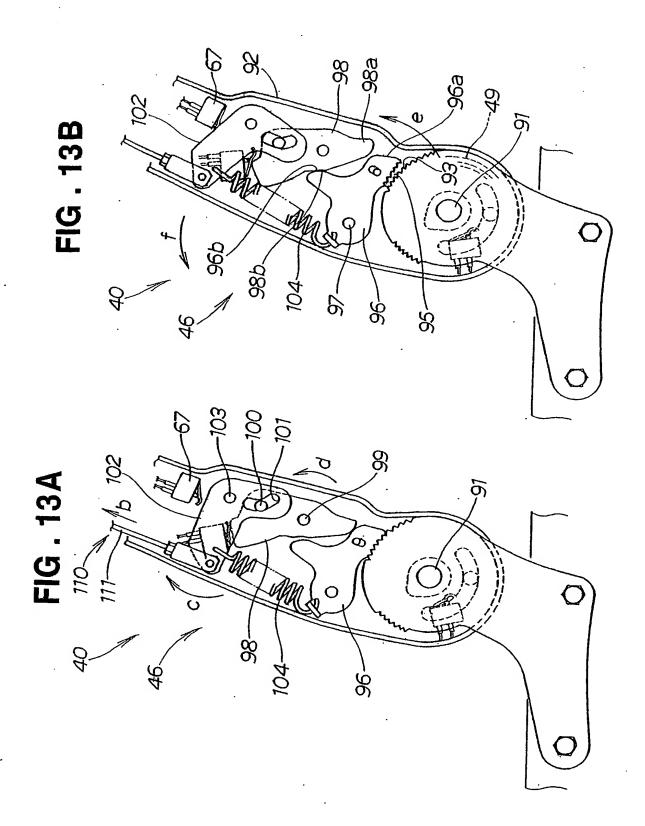
Inventor: Suda et al.
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hannre
Phone No.: 612.336.4722
Sheet 12 of 45

FIG. 12A





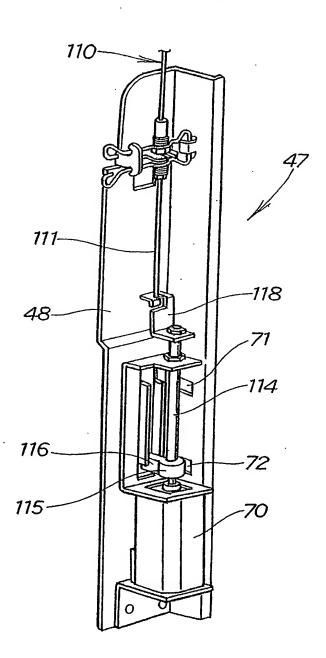
Inventor: Suda et al.
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hamre
Phone No.: 612.336.4722
Sheet 13 of 45



10/518659

Inventor: Suda et al.
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hamre
Phone No.: 612.336.4722
Sheet 14 of 45

FIG. 14



Inventor: Suda et al.
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hamre
Phone No.: 612.336.4722

Sheet 15 of 45

### FIG. 15A

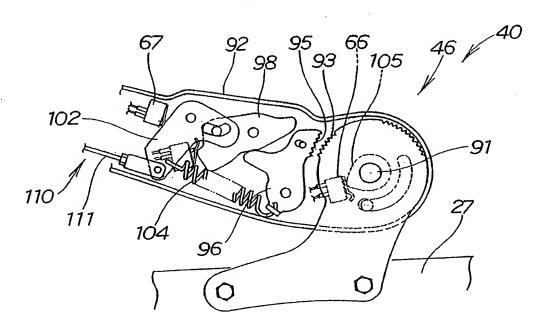
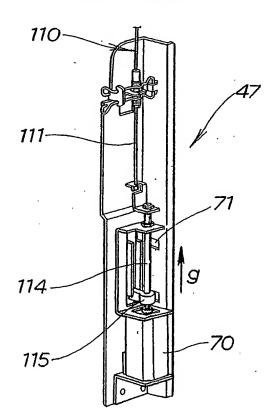
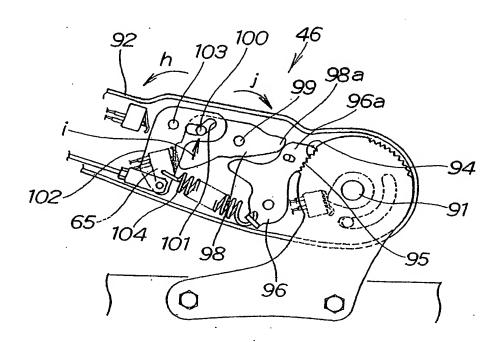


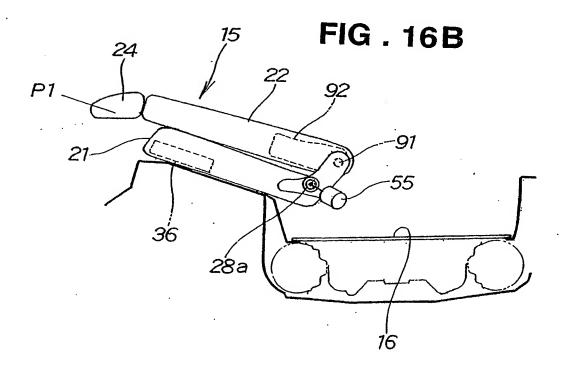
FIG. 15B



Inventor: Suda et al.
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hamre
Phone No.: 612.336.4722
Sheet 16 of 45

# FIG. 16A





Inventor: Suda et al.
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hamre
Phone No.: 612.336.4722
Sheet 17 of 45

FIG. 17A

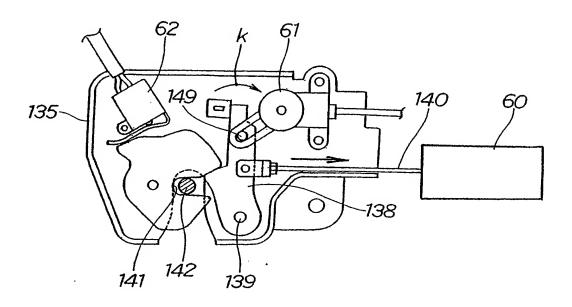
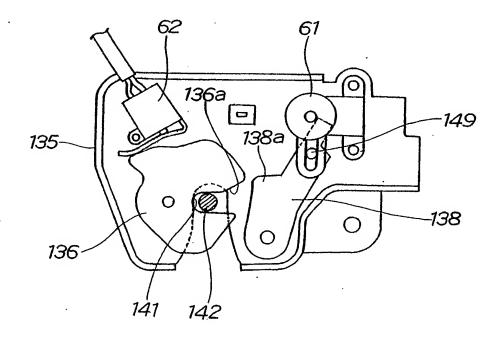
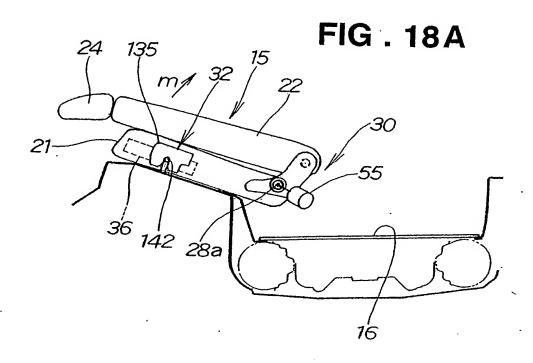
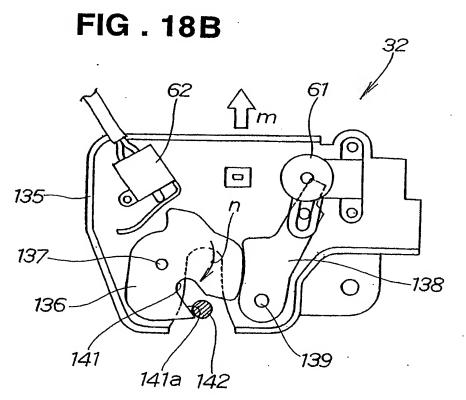


FIG. 17B



Inventor: Suda et al.
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hamre
Phone No.: 612.336.4722
Sheet 18 of 45

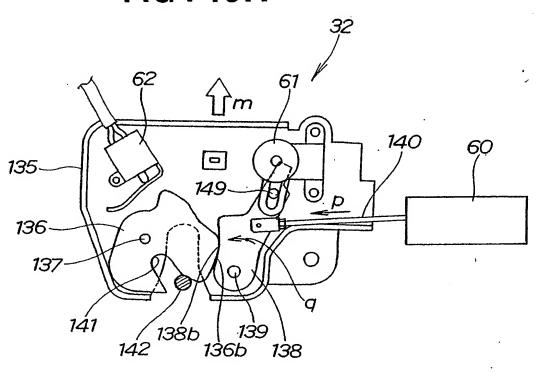


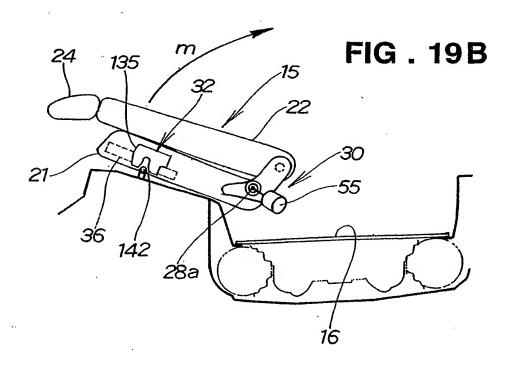


Inventor: Suda et al.
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT

Attorney Name: Curtis B. Hamre Phone No.: 612.336.4722 Sheet 19 of 45

FIG. 19A





Inventor: Suda et al.
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hamre
Phone No.: 612.336.4722

Sheet 20 of 45

# FIG. 20 A

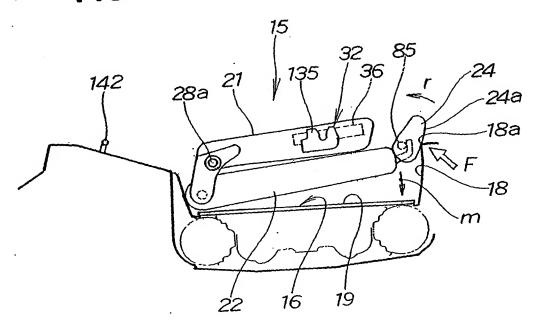
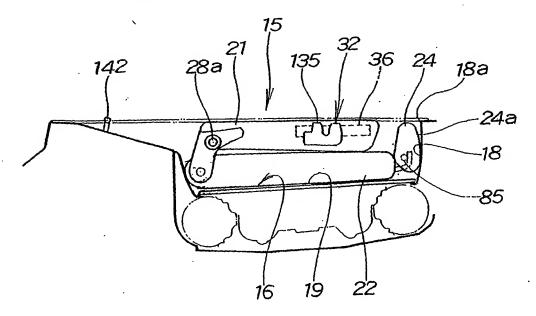


FIG . 20B



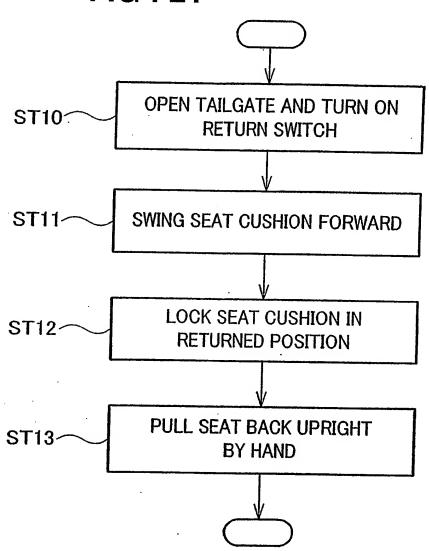
Inventor: Suda et al.

Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT

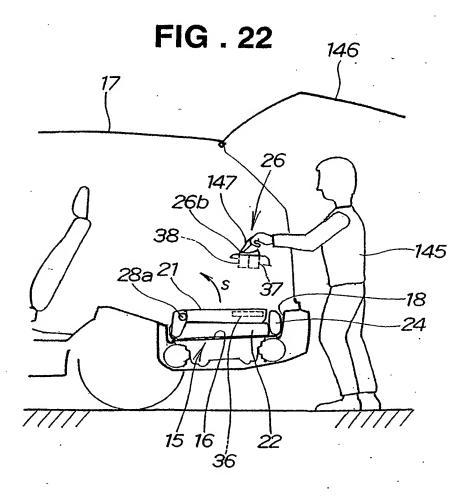
Attorney Name: Curtis B. Hamre Phone No.: 612.336.4722

Sheet 21 of 45

FIG . 21

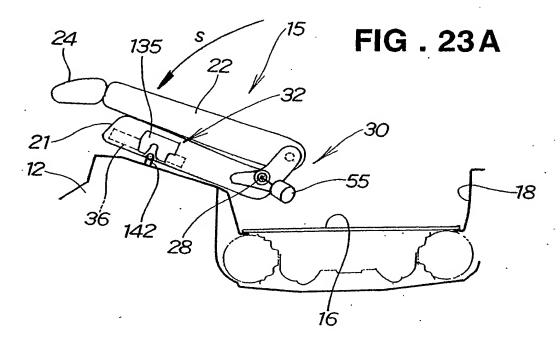


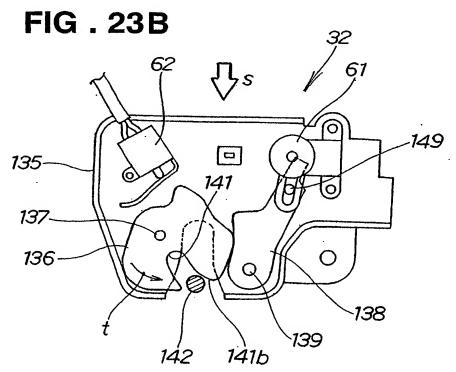
Inventor: Suda et al.
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hamre
Phone No.: 612.336.4722
Sheet 22 of 45



THE THE CONTRACTOR OF THE SECOND

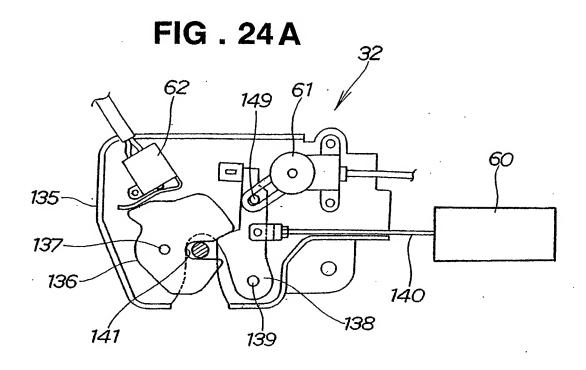
Inventor: Suda et al.
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hamre
Phone No.: 612.336.4722
Sheet 23 of 45

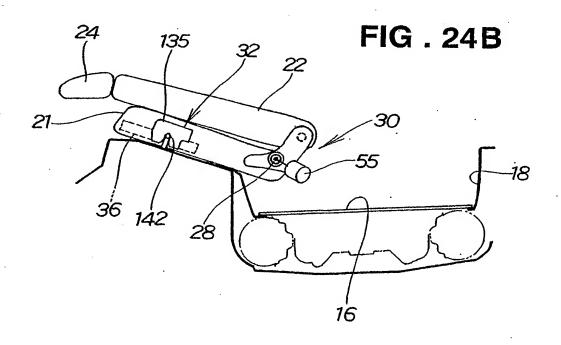




Inventor: Suda et al.
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT

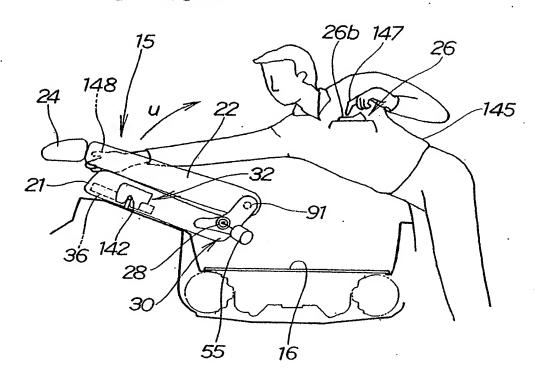
Attorney Name: Curtis B. Hamre Phone No.: 612.336.4722 Sheet 24 of 45

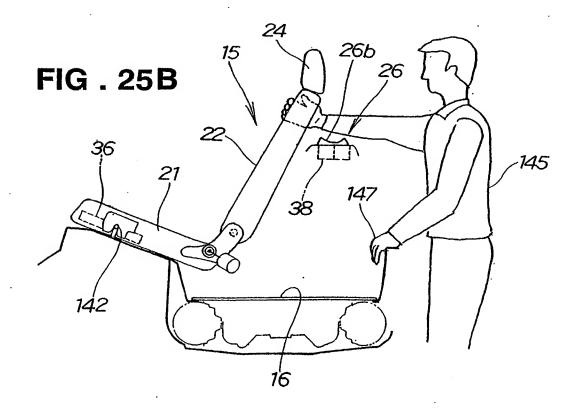




Inventor: Suda et al.
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hamre
Phone No.: 612.336.4722
Sheet 25 of 45

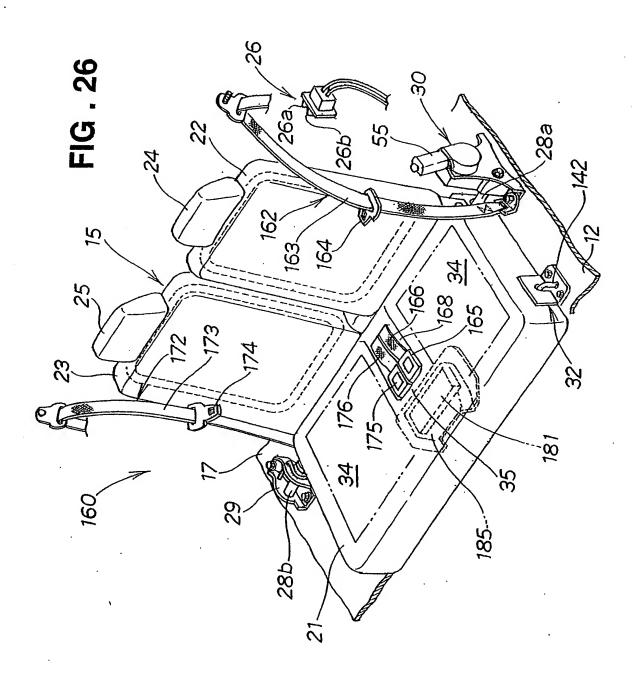
### FIG. 25 A





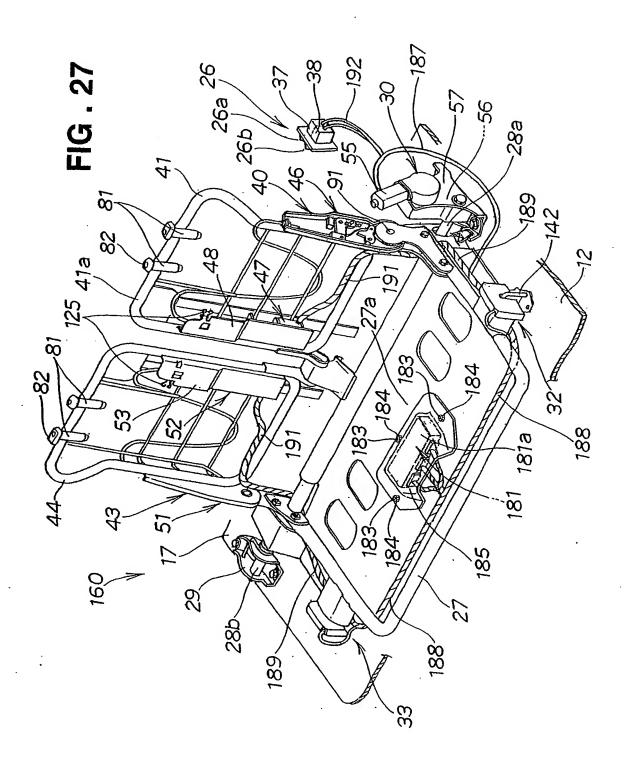
Inventor: Suda et al.

Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hamre
Phone No.: 612.336.4722
Sheet 26 of 45



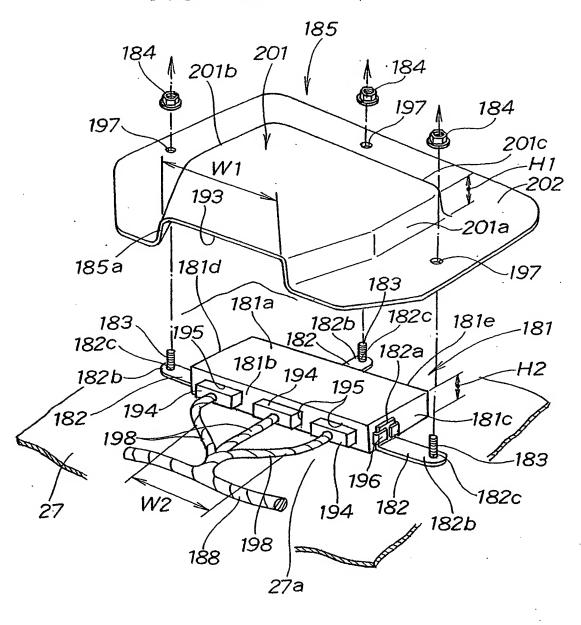
Inventor: Suda et al.

Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hamre
Phone No.: 612.336.4722
Sheet 27 of 45



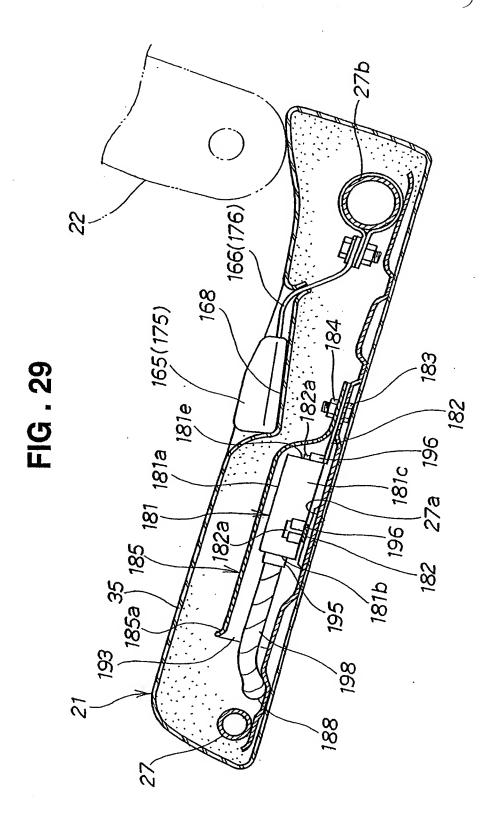
Inventor: Suda et al.
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hamre
Phone No.: 612.336.4722
Sheet 28 of 45

FIG. 28



Inventor: Suda et al.
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT

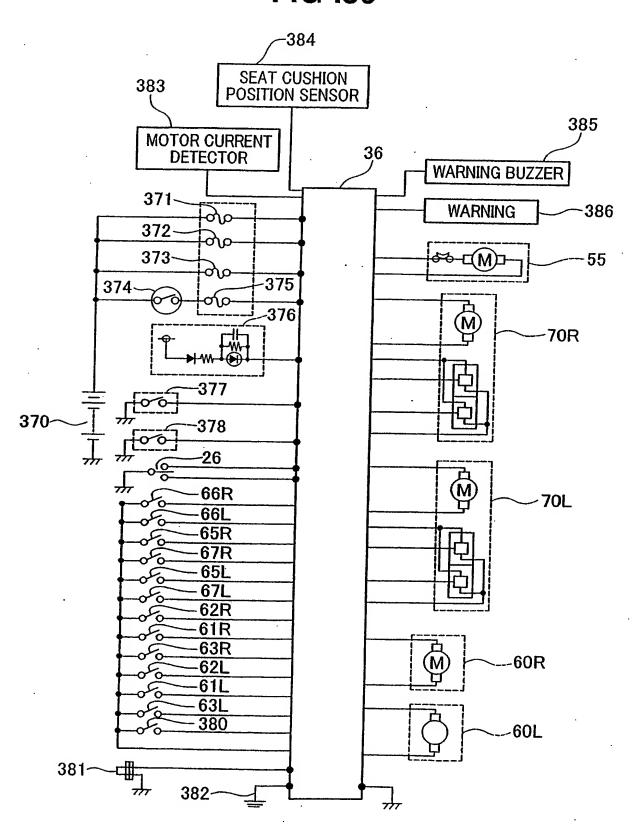
Attorney Name: Curtis B. Hamre Phone No.: 612.336.4722 Sheet 29 of 45



Inventor: Suda et al.
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hamre
Phone No.: 612.336.4722

Sheet 30 of 45

#### FIG .30



Inventor: Suda et al.
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hantre
Phone No.: 612.336.4722
Sheet 31 of 45

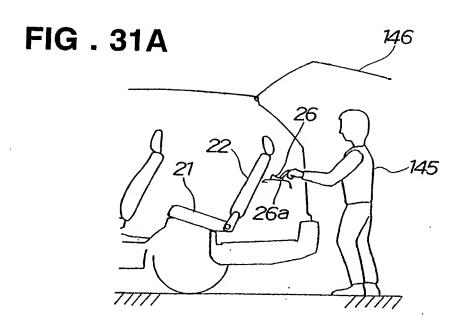


FIG . 31B

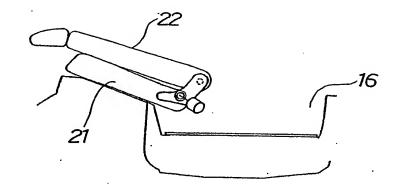


FIG . 31C

Inventor: Suda et al.
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hanne
Phone No.: 612.336.4722
Sheet 32 of 45

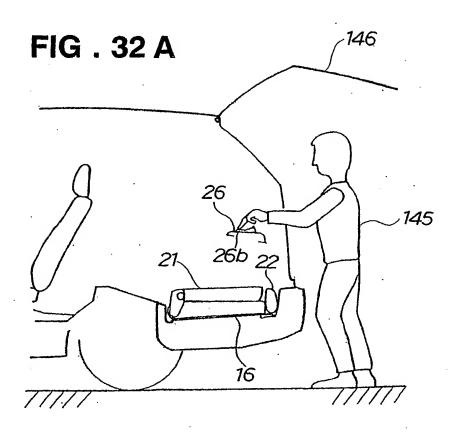
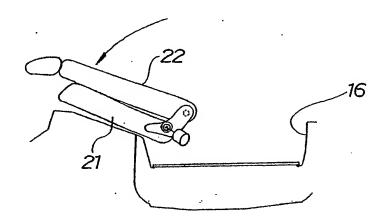


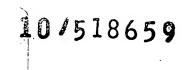
FIG . 32B



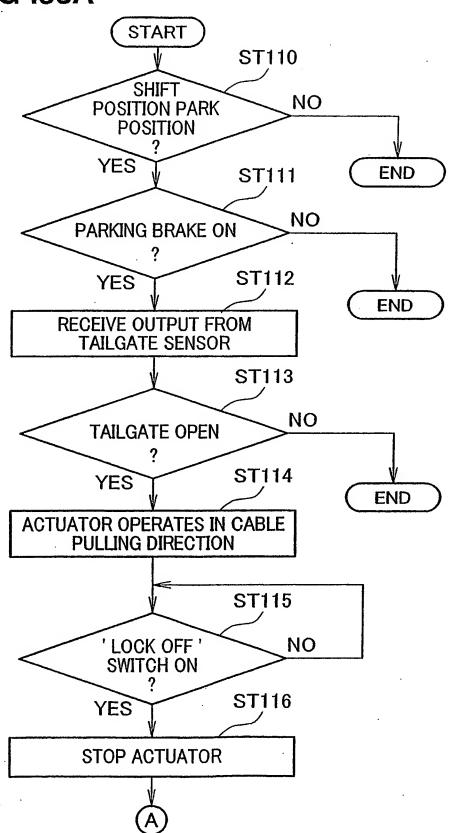
Inventor: Suda et al.

Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hamre
Phone No.: 612.336.4722

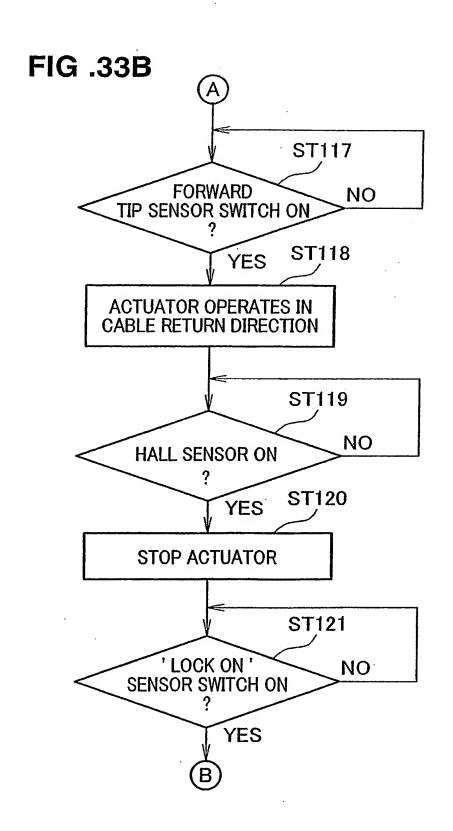
Sheet 33 of 45



#### **FIG .33A**



Inventor: Suda et al.
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hamre
Phone No.: 612.336.4722
Sheet 34 of 45

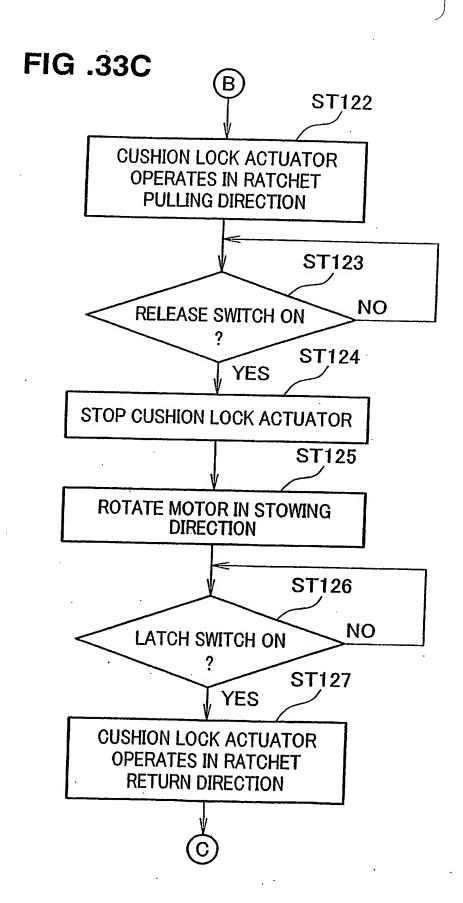


Inventor: Suda et al.

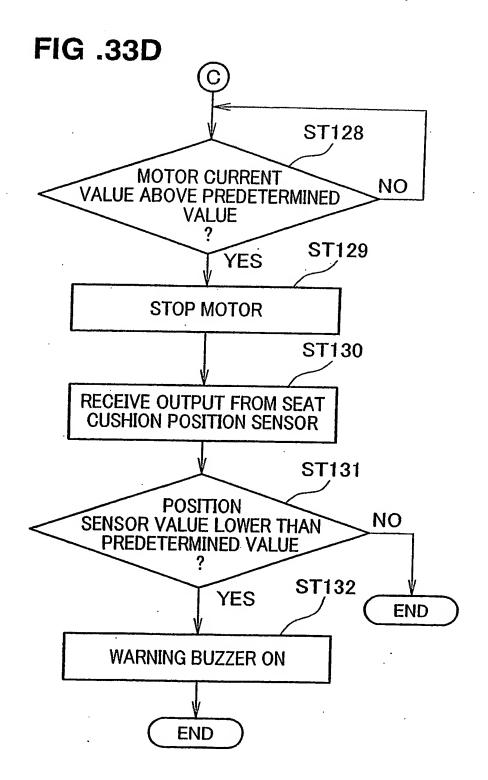
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT

Attorney Name: Curtis B. Hamre Phone No.: 612.336.4722

Sheet 35 of 45



Inventor: Suda et al. Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hamre Phone No.: 612.336.4722 Sheet 36 of 45



Inventor: Suda et al.
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hannre
Phone No.: 612.336.4722
Sheet 37 of 45

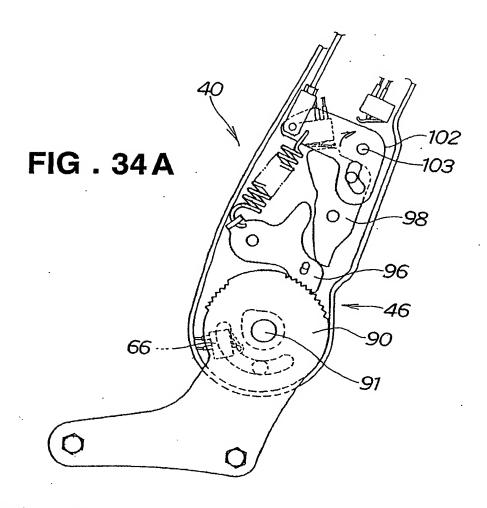
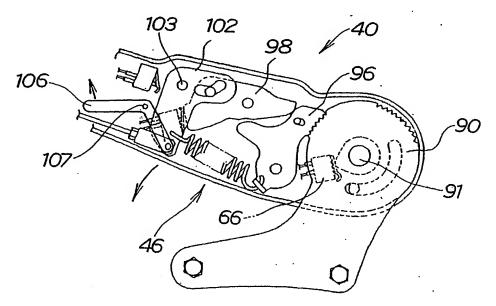
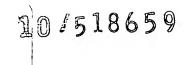


FIG. 34B





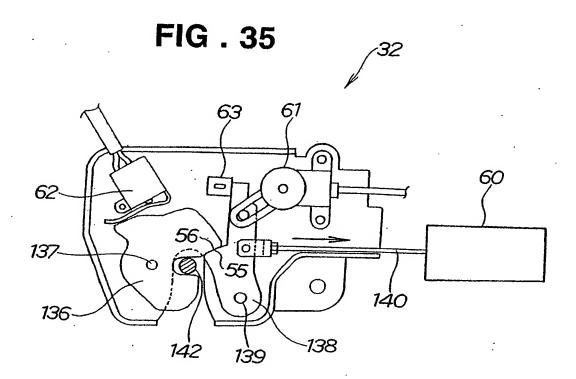
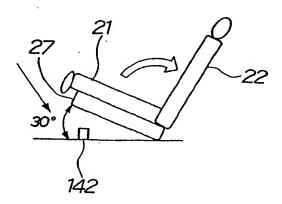
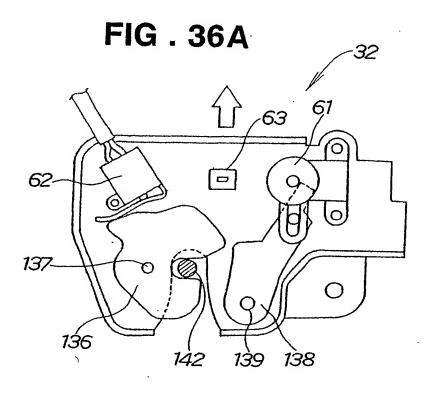
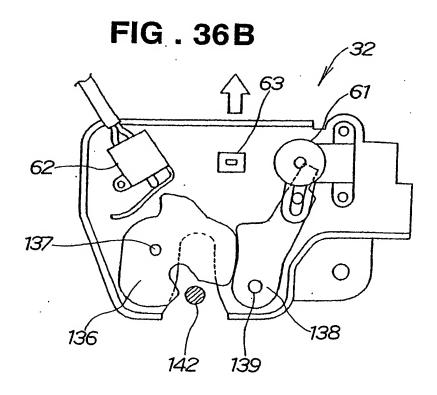


FIG . 37



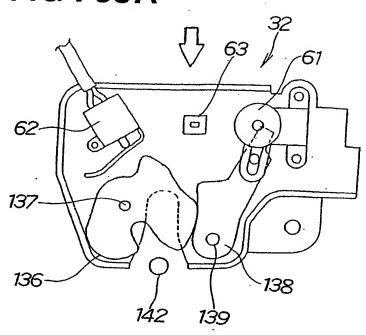
Inventor: Suda et al.
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hamre
Phone No.: 612.336.4722
Sheet 39 of 45

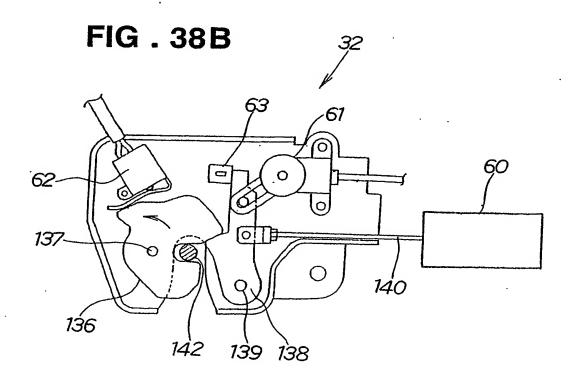




Inventor: Suda et al.
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hamre
Phone No.: 612.336.4722
Sheet 40 of 45

### FIG. 38A





Inventor: Suda et al. Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT Attorney Name: Curtis B. Hantre Phone No.: 612.336.4722 Sheet 41 of 45 START RETURN NO SWITCH BEING PRESSED YES NO SHIFT POSITION PARK POSITION **END** YES NO PARKING BRAKE ON **VYES END** RECEIVE OUTPUT FROM TAILGATE SENSOR NO TAILGATE OPEN YES **END** ROTATE MOTOR IN RETURN DIRECTION NO MOTOR CURRENT

ST347-

ST352-

ST353-

ST354-

END'

ST340

ST341

ST342

ST343-

ST344

ST345

ST346-

ST348

ST349

ST350

ST351

NO

VALUE ABOVE PREDETERMINED VALUE

STOP MOTOR

RECEIVE OUTPUT OF SEAT CUSHION **POSITION SENSOR** 

**OUTPUT OF** 

POSITION SENSOR BELOW

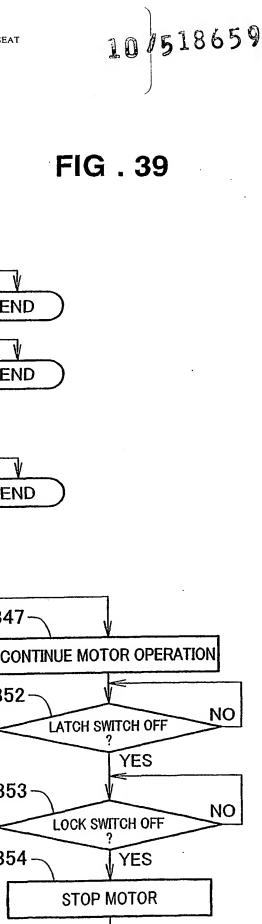
PREDETERMINED VALUE

WARNING BUZZER ON

**END** 

V YES

YES



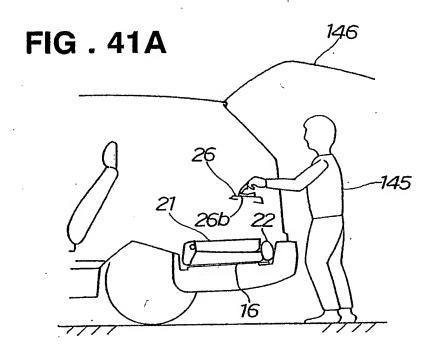
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT 10/518659 Attorney Name: Curtis B. Hamre Phone No.: 612.336.4722 Sheet 42 of 45 START FIG. 40 ST460 RETURN NO SWITCH BEING PRESSED YES ST461-SHIFT NO POSITION PARK POSITION **END VYES** ST462-NO PARKING BRAKE ON ST463-√ YES **END** RECEIVE OUTPUT OF TAILGATE SENSOR ST464 NO TAILGATE OPEN ST465-YES **END** ROTATE MOTOR IN RETURN DIRECTION ST466-**UNLOCK RECLINING LOCK** ST467-MOTOR CURRENT NO VALUE ABOVE PREDETERMINED ST468 **VALUE** ST469 CONTINUE MOTOR OPERATION YES STOP MOTOR ST473 ST470 NO LATCH SWITCH OFF RECEIVE OUTPUT OF SEAT CUSHION POSITION SENSOR YES ST471-ST474 **OUTPUT OF** NO NO POSITION SENSOR BELOW LOCK SWITCH OFF PREDETERMINED VALUE ST475 **▼YES** ST472 **VYES** STOP MOTOR WARNING BUZZER ON **END** 

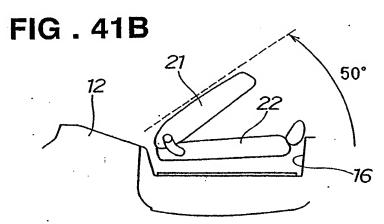
Inventor: Suda et al.

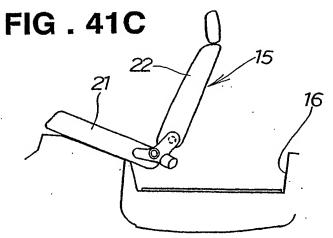
**END** 

Inventor: Suda et al.
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT

Attorney Name: Curtis B. Hamre Phone No.: 612.336.4722 Sheet 43 of 45

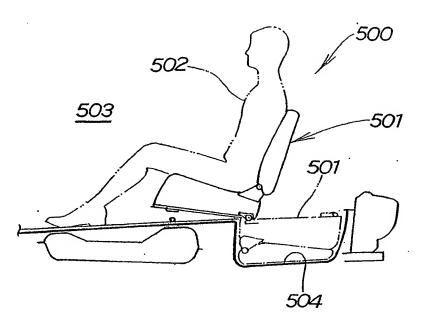






Inventor: Suda et al.
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hamre
Phone No.: 612.336.4722
Sheet 44 of 45

FIG . 42 (PRIOR ART)

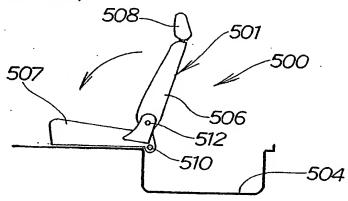


Inventor: Suda et al.
Docket No.: 08373.0341USWO
Title: ELECTRIC STOWING SYSTEM FOR VEHICLE SEAT
Attorney Name: Curtis B. Hannre

Phone No.: 612.336.4722 Sheet 45 of 45

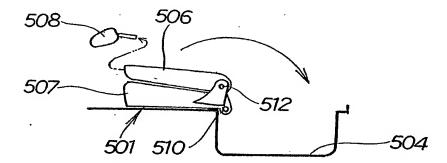
### FIG . 43A

(PRIOR ART)



# FIG. 43B

(PRIOR ART)



### FIG . 43C

(PRIOR ART)

